

### **REMARKS**

Claims 1-59 are pending in the current application. Claims 45 and 48 have been amended. Support for the amendments may be found throughout the specification, for example, in the originally filed claims.

### **ELECTION/RESTRICTION**

A requirement for restriction has been made under 37 C.F.R. 1.499 between the inventions of Groups:

- I. Claims 1-10 and 55-58, drawn to neisserial bacteria in which the expression of Imp protein is functionally downregulated such that the level of LPS in the outer membrane is decreased compared to wild-type neisserial bacteria.
- II. Claims 11-44 and 55-58, drawn to chimeric proteins comprising at least one part of which is derived from an Imp protein from a neisserial strain and at least one part which is derived from at least one different protein.
- III. Claims 45-47 and 53-54, drawn to polynucleotides encoding a chimeric Imp protein, vectors containing said polynucleotide, and host cells comprising said protein, and methods of producing said protein by culturing said host cell.
- IV. Claims 48-52 and 55-58, drawn to outer membrane vesicle preparations.
- V. Claim 59, drawn to a method of preventing a neisserial infection by administering a chimeric protein comprising at least one part of which is derived from an Imp protein from a neisserial strain and at least one part which is derived from at least one different protein.
- VI. Claim 59, drawn to a method of preventing a neisserial infection by administering an outer membrane vesicle preparation.
- VII. Claim 59, drawn to a method of preventing a neisserial infection by administering neisserial bacteria in which the expression of an Imp protein is functionally downregulated such that the level of LPS in the

outer membrane is decreased compared to wild-type neisserial bacteria.

- VIII. Claim 59, drawn to a method of treating a neisserial infection by administering a chimeric protein comprising at least one part of which is derived from an Imp protein from a neisserial strain and at least one part which is derived from at least one different protein.
- IX. Claim 59, drawn to a method of treating a neisserial infection by administering an outer membrane vesicle preparation.
- X. Claim 59, drawn to a method of treating a neisserial infection by administering neisserial bacteria in which the expression of an Imp protein is functionally downregulated such that the level of LPS in the outer membrane is decreased compared to wild-type neisserial bacteria.

Applicants elect Group IV, Claims 48-52 and 55-58, with traverse. The Examiner alleges that the inventions of Groups I-X lack the same or corresponding special technical feature based on the disclosure of Berthet *et al.* (WO04/014418A2). Berthet *et al.* relates to combinations of Neisserial antigens which when combined lead to a surprising enhancement of the efficacy of the vaccine against Neisserial infection. (page 6, lines 3-5). Berthet *et al.* sought to express OstA protein in their vaccines, not downregulate OstA/Imp protein. (pages 24-25). In contrast, Applicants' invention relates to (a) a Gram negative bacterium in which a protein, such as Imp and MsbA, involved in the transport of LPS transport is downregulated, (b) a mutated Imp or MsbA protein, for example, a chimeric protein, (b) polynucleotides comprising a sequence encoding the mutated or chimeric protein of the invention, expression vectors comprising a sequence encoding the chimeric protein of the invention and a host cell comprising said expression vector, (d) outer membrane vesicles derived from the Gram negative bacteria, (e) methods for producing the chimeric protein or outer membrane vesicle, and (f) methods for the treatment or prevention of Gram negative bacterial infection (pages 3-6). Therefore, Groups I-X have a special technical feature that define a contribution over Berthet *et al.*

**Chimeric Protein Election Requirement Applicable To All Groups**

Applicants were further required to elect the portion of Imp altered (from claims 20-33) and the protein that is fused to Imp (from claims 35-43). Applicants elect Claim 22, wherein loop 8 is altered, and Claim 37, wherein the at least one part which is derived from at least one different protein is Hsf.

Claims 48-52 and 55-58 read on the elected invention.

Applicants also note that the subject matter of Groups IV, VI and IX are related to each other as product and a process for using the product. When product claims (for example, one or more of Claims 48-52 and 55-58) are found to be allowable, Applicants respectfully request rejoinder of process claims that are dependent or otherwise include all the limitations of the allowed product claims as required by MPEP § 821.04(b).

Applicants expressly reserve the right to prosecute the subject matter in the non-elected claims, originally filed claims, or any other claims supported by the specification in one or more continuing applications.


**CONCLUSION**

Applicants elect Group IV with traverse (Claims 48-52 and 55-58). Applicants further elect loop 8 as the the portion of Imp altered, Claim 22, and Hsf as the different protein that is fused to Imp, Claim 37.

Should any outstanding issues remain, the Examiner is encouraged to contact Applicants' undersigned representative.

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